

In re: *Kong et al.*
Appl. Serial No. 09/715,576
Filed: November 17, 2000
Page 4

Remarks

This is in response to the final Office Action mailed August 29, 2005, in the above-referenced application. The Examiner maintains the rejection of Claims 22, 24, and 49 as anticipated by, or, in the alternative, as obvious in view of U.S. Patent No. 3,659,552 to Briody. Applicants respectfully traverse these rejections.

As a preliminary matter, contrary to the arguments on page 4 of the Office Action, the claims do not recite an apparatus "carved out of a ring." Applicants are not claiming a "product-by-process," nor are Applicants basing patentability on the "method of production" of the apparatus. The claims recite the structure of the apparatus and do not define the apparatus in terms of a process for making the same.

To this end, independent Claim 49 recites a susceptor "defined by a plurality of straight sidewall sections, each section having a planar surface." By definition, a "planar" surface is a flat surface, that is, without curvature. See also Figure 6 of the present application, illustrating an exemplary susceptor having planar sidewall section surfaces, i.e., flat, without curvature.

In contrast, the Briody apparatus includes a hollow drum-like work holder 16 formed of a plurality of annular members, such as graphite rings 15-15. Column 2, lines 40-46. As illustrated in Figure 1, the plurality of rings 15 form curved side walls in a ringed drum configuration. See also Figure 2, illustrating the curved surface of a section of a ring 15.

Because the drum-like work holder of the Briody apparatus includes curved, not planar, walls, the claimed apparatus differs structurally from the Briody apparatus. Accordingly, Briody does not anticipate the claimed invention, and Applicants respectfully request withdrawal of this rejection.

Independent Claim 49 further recites that the "facing sidewall sections radiantly and directly heat the exposed surface of a facing substrate wafer to substantially the same temperature as said susceptor portion heats a substrate wafer that is in one of said wafer pockets to thereby minimize or substantially eliminate radial and axial temperature gradients across a substrate wafer." The basis of the obviousness rejection appears to be

In re: *Kong et al.*
Appl. Serial No. 09/715,576
Filed: November 17, 2000
Page 5

the Examiner's conclusion that the Briody apparatus "is precisely as claimed" and thus would exhibit the same heating response. See also the arguments in the paragraph bridging pages 4-5 of the Office Action. Applicants traverse this rejection as well.

The structure of the apparatus of Briody is not "precisely as claimed." As noted above, the sidewall sections of the susceptor of the claimed invention have planar (i.e., flat, not curved) surfaces. In contrast, the walls of the Briody apparatus are curved. Thus, contrary to the arguments set forth in the Office Action, the claimed invention differs structurally from the Briody apparatus.

The apparatus of Briody and the claimed invention also do not function in the same way. The planar surfaces of the sidewall sections of the claimed susceptor facilitate radiantly heating one another across an appropriately dimensioned space by allowing for direct alignment of the heating sections. Specification, page 5, line 18--page 6, line 17; page 9, line 14--page 10, line 15.

In contrast, the curved surfaces of the drum like work holder 16 of the Briody patent would not provide a linear, more direct heat path from one wafer pocket to another. Further, Briody requires "quartz members 40-40 . . . between the base member 12 and the rotatable support plate 14 to reflect heat toward the drum 16 so that the temperature gradient throughout the drum 16 stays relatively uniform." Column 2, lines 72-75. These quartz members are the only means of adjusting the temperature gradient in the Briody patent. Thus, at best, Briody suggests the use of components separate from the susceptor to control temperature. Briody does not suggest modifying the drum-like work holder or its rings to enhance an even temperature gradient, and to conclude otherwise requires an improper hindsight reliance on Applicants' own specification.

The claimed apparatus and the Briody apparatus differ structurally and functionally from another. Further, Briody does not teach or suggest any modifications to the drum like work member or its components, much less suggest any modifications thereof to enhance temperature gradients. Accordingly, Applicants respectfully submit that the claimed invention is not obvious in view of Briody and request withdrawal of this rejection as well.

In re: *Kong et al.*
Appl. Serial No. 09/715,576
Filed: November 17, 2000
Page 6

The Examiner also maintains his rejection of Claim 50 as obvious over Briody and further in view of U.S. Patent No. 4,579,080 to Martin. Applicants respectfully submit that Claim 50 is patentable for the reasons set forth above and accordingly request withdrawal of this rejection as well.

Additionally, Briody and Martin teach away from one another and are not properly combined. As an example, the Martin apparatus includes areas of reduced thickness. Column 4, lines 55-64. The Briody patent does not teach or suggest such a modification. As another example, the Martin apparatus includes wafer receptacles shaped to prevent a wafer from contacting the susceptor. Column 10, lines 30-35. In contrast, the Briody patent states that its device centrifugally forces the articles against the susceptor surface. Column 1, lines 64-66. Because the Briody and the Martin patents teach away from various operational aspects of one another, the cited patents are not properly combinable. For this reason as well, Applicants submit that Claim 50 is patentable over the cited patents and respectfully request withdrawal of this rejection as well.

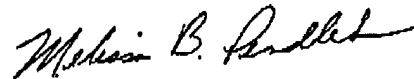
The rejections of record having been addressed in full in the foregoing, Applicants respectfully submit that the present application is in condition for allowance, which action is respectfully solicited. Should the Examiner have any questions regarding the foregoing, it is respectfully requested that the Examiner contact the undersigned at his convenience to expedite examination and allowance of this matter.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow

In re: *Kong et al.*
Appl. Serial No. 09/715,576
Filed: November 17, 2000
Page 7

consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 50-0332.

Respectfully submitted,



Melissa B. Pendleton
Reg. No. 35,459

021176

Summa & Allan, P.A.
11610 N. Community House Rd., Suite 200
Ballantyne Corporate Park
Charlotte, North Carolina 28277-2162
Telephone: 704-945-6700
Facsimile: 704-945-6735
SAFIRM DOCS\5000\89A\Resp121305.doc